

REMARKS

In a first Office Action dated July 2, 2004, the Examiner rejected claims 1-6 and 8 under 35 U.S.C. §103(a) as being unpatentable over Veerina et al. (U.S. patent no. 6,243,373, hereinafter referred to as "Veerina") in view of Chuah et al. (U.S. patent no. 6,735,190, hereinafter referred to as "Chuah"). The Examiner rejected claim 7 under 35 U.S.C. §103(a) as being unpatentable over Veerina in view of Chuah and further in view of Tappan (U.S. patent no. 5,991,300). The Examiner rejected claims 9-11, 13-15, and 18-22 under 35 U.S.C. §103(a) as being unpatentable over Chuah in view of Veerina. The Examiner rejected claims 12 and 16-17 under 35 U.S.C. §103(a) as being unpatentable over Chuah in view of Veerina and further in view of Tappan. The Examiner rejected claims 23-25 under 35 U.S.C. §103(a) as being unpatentable over Tappan in view of Veerina. The rejections are traversed and reconsideration is hereby respectfully requested.

The Examiner rejected claims 1-6 and 8 under 35 U.S.C. §103(a) as being unpatentable over Veerina in view of Chuah. Claim 1, as amended, provides for receiving multiple data packets, wherein each received data packet includes a routing address, determining an address label for each received data packet based on the data packet's routing address, adding the address label determined for each received data packet to the data packet to produce a modified data packet; multiplexing the modified data packets, and wrapping the multiplexed data packets with a new data transmission header comprising routing information for the multiplexed data packets to produce a data transmission unit. These features are not taught by either Veerina or Chuah.

Veerina merely teaches a replacing of a first IP address of a data packet with a second IP address. As acknowledged by the Examiner, Veerina teaches nothing concerning a use of address labels. The multiplexing referred to by Veerina merely refers to routing multiple data packets, each intended for, or sourced by, a different user, to a single IP address before replacing the IP address with a new IP address and distributing the data packets. Nowhere does Veerina teach multiplexing data packets to which an address label has been added and wrapping the multiplexed data packets with a new data transmission header, that is, adding a new data transmission header to the encapsulated

data packets, that includes routing information for the multiplexed data packets to produce a data transmission unit.

Chuah teaches a receipt, by a first Internet Telephony Server (ITS), of multiple data packets. Each data packet includes a destination Internet Protocol (DIP) address and a source Internet Protocol (SIP) address in its header. Based on the DIP and SIP of each data packet, the ITS then establishes an IP-to-IP tunnel with a second ITS and forwards the data packets to a first Label Switching Router (LSR) that is associated with the first ITS. The first LSR adds a Multi-Protocol Label Switching (MPLS) label to the header of each data packet and transmits the data packets, each including its own MPLS label, to a second LSR that is associated with the second ITS.

Chuah further teaches that when each data packet of the multiple data packets is associated with a same SIP or DIP, the first LSR may convey an Advertisement message to the second LSR. The Advertisement message informs of the SIP and DIP of the data packets that will follow and further informs whether the packets will have their SIP and/or DIP removed. The first LSR then removes the common SIP or DIP from each data packet and, based on the received Advertisement message, the second LSR then adds the missing SIP or DIP to each received packet. Chuah also teaches that when each data packet of the multiple data packets is associated with a different SIP or DIP, the Advertisement message may include a list of SIPs or DIPs. The SIPs or DIPs are listed in the same order as an order of the sending of the data packets, and the second LSR then adds a missing SIP or DIP to each received data packet based on the order that the packets are received and the listed order of the SIPs or DIPs.

Chuah does not teach an adding of a label that corresponds to the removed SIP or DIP. The SIP or DIP is just removed altogether. Thus it is essential in Chuah that when different SIPs or DIPs are removed from the packets, the packets be conveyed in a predesignated order or else the receiving LSR will add a wrong SIP or DIP to each received data packet. Further, Chuah teaches multiplexing in the sense that each data packet is conveyed over a same IP-to-IP tunnel. However, each data packet in Chuah includes its own MPLS label in its own, individual header and is then routed based on its individual header. Nowhere does Chuah teach multiplexing in the sense that each of

multiple data packets that has its SIP or DIP removed are then together wrapped by a new data transmission header that includes routing information for the multiplexed data packets to produce a data transmission unit.

Therefore, neither Veerina nor Chuah, individually or in combination, teach the features of claim 1 of determining an address label for each of multiple received data packet based on the data packet's routing address, adding the address label determined for each received data packet to the data packet to produce a modified data packet, multiplexing the modified data packets, and wrapping the multiplexed data packets with a new data transmission header. Accordingly, the applicants respectfully request that claim 1 may now be passed to allowance.

Since claims 2 and 4-8 depend upon allowable claim 1, the applicants respectfully request that claims 2 and 4-8 may now be passed to allowance.

The Examiner rejected claims 9-11, 13-15, and 18-22 under 35 U.S.C. §103(a) as being unpatentable over Chuah in view of Veerina. As noted above, neither Veerina nor Chuah, individually or in combination, teach the features of claim 9 of determining, by a data transmitting device, an address label for each received data packet based on the data packet's routing address, adding, by the data transmitting device, the address label determined for each received data packet to the data packet to produce a modified data packet, multiplexing, by the data transmitting device, the modified data packets, adding, by the data transmitting device to the multiplexed data packets, a data transmission header that includes routing information for the multiplexed packets to produce a data transmission unit, and transmitting, by the data transmitting device, the data transmission unit to a data receiving device. Similarly, neither Veerina nor Chuah, individually or in combination, teach the features of claim 18, as amended, of a processor coupled to a data receiving unit that determines an address label for each received data packet based on the data packet's routing address, adds the address label determined for each received data packet to the data packet to produce a modified data packet, multiplexes the modified data packets, and wraps the multiplexed data packets with a new data transmission header that includes routing information for the multiplexed data packets to produce a data

transmission unit. Accordingly, the applicants respectfully request that claims 9 and 18 may now be passed to allowance.

Since claims 10-17 depend upon allowable claim 9 and claims 19-22 depend upon allowable claim 18, the applicants respectfully request that claims 10-17 and 19-22 may now be passed to allowance.

The Examiner rejected claims 23-25 under 35 U.S.C. §103(a) as being unpatentable over Tappan in view of Veerina. Claim 23 provides a receiving unit that receives multiplexed data packets based on a data transmission header that wraps the multiplexed data packets, wherein each data packet of the multiplexed data packets comprises an address label, and a processor that determines a routing address for each data packet of the multiplexed data packets based on the address label and routes each data packet based on the data packet's determined routing address.

As noted above, Veerina does not teach multiplexed data packets that are wrapped by data transmission header, wherein each data packet includes an address label that is used to determine a corresponding routing address for the data packet. Tappan teaches a data packet that includes an address of a router to which the packet will be forwarded in a hop. When the router receives the data packet, the router determines a next router for a forwarding of the packet in a next hop by reference to a table. To speed up the forwarding of the packet, Tappan teaches an insertion of a "shim" in the packet header that narrows, and thereby speeds up, a searching of the table to determine the next router for the next hop. In other words, the shim is inserted in the header of the data transmission unit, not in the header of packets that are wrapped to form a data transmission unit and to which a new data transmission header is added.

Therefore, neither Tappan nor Veerina, individually or in combination, teach the features of claim 23 of a receiving unit that receives a data transmission unit that includes multiplexed data packets based on a data transmission header that wraps the multiplexed data packets, wherein each data packet includes an address label, and a processor coupled to the receiving unit that extracts multiple data packets from the data transmission unit, determines a routing address for each data packet of the multiple data packets based on

the address label, and routes each data packet based on the data packet's determined routing address. Accordingly, the applicants respectfully request that claim 23 may now be passed to allowance.

Since claims 24-25 depend upon allowable claim 23, the applicants respectfully request that claims 24-25 may now be passed to allowance.

As the applicants have overcome all substantive rejections and objections given by the Examiner and have complied with all requests properly presented by the Examiner, the applicants contend that this Amendment, with the above discussion, overcomes the Examiner's objections to and rejections of the pending claims. Therefore, the applicants respectfully solicit allowance of the application. If the Examiner is of the opinion that any issues regarding the status of the claims remain after this response, the Examiner is invited to contact the undersigned representative to expedite resolution of the matter.

Respectfully submitted,

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